



IDAHO DEPARTMENT OF HEALTH & WELFARE

Bureau of Environmental Health and Safety

January 2000

FACTS ABOUT CARBON MONOXIDE (CO)

What is carbon monoxide?

Carbon Monoxide (CO) is a colorless, odorless, tasteless, non-irritating gas produced whenever any carbon-based fuel such as wood, charcoal, gasoline, oil, kerosene, propane, or natural gas is not burned properly (incomplete combustion). CO exposure is responsible for more fatal unintentional poisonings in the United States than any other agent, with the highest incidence occurring during the cold-weather months.

Where does carbon monoxide come from?

Potential sources of CO include: unvented kerosene, propane, and gas space heaters; leaking chimneys and furnaces; back-drafting or spillage from furnaces, gas water heaters, wood stoves, and fireplaces; gas ovens and ranges; and automobile exhaust fumes. Tobacco smoke, including second hand smoke, is also a source of CO exposure in homes with smokers.

How can carbon monoxide poisoning affect my health?

Exposure to CO can be deadly. The Consumer Product Safety Commission reports that approximately 200 people per year are killed by accidental CO poisoning with an additional 5,000 people injured.

CO enters the bloodstream and reduces the delivery of oxygen to the body's organs and tissues. Symptoms vary widely based on exposure level, duration, and the general health and age of an individual. Mild exposure symptoms may mimic the flu and include: mild headache and weakness, dizziness, sleepiness,

shortness of breath, tightness in the chest, nausea and/or vomiting. High or prolonged exposures to CO can cause: confusion, loss of muscle control, blurred vision, extreme headache and weakness, fainting, convulsions, and death.

What populations are most at risk?

Anyone can be at risk for CO exposure. However, the following populations are more sensitive to CO:

- * infants and young children
- * fetuses and pregnant women
- * the elderly
- * persons with heart disease, lung disease, or anemia

What should you do if carbon monoxide poisoning is suspected?

- * Move the victim to fresh air immediately.
- * Open doors and windows to improve ventilation.
- * Turn off combustion appliances and **leave the house.**
- * Get to the *Emergency Room* of a local hospital and tell the physician you suspect CO poisoning. However, the victim should not drive if the symptoms are severe or persist once outside. Call for medical assistance.

If CO poisoning has occurred, it can usually be diagnosed by a routine blood test done soon after exposure.

What steps can be taken to reduce exposure and protect yourself from carbon monoxide poisoning?

- **Do** consider purchasing and installing a CO detector that meets Underwriters Laboratories (UL) standard 2034-95, if your house has fuel-burning appliances. Carefully follow the manufacturer's instructions for proper placement, use, and maintenance.
 - **Do** have a qualified technician inspect, clean, and adjust your wood and gas appliances and chimneys/vents every fall, before the start of home heating season.
 - **Do** purchase gas appliances that vent their fumes to the outside-when-ever possible. Have them installed by a trained professional.
 - **Do** read and follow all of the instructions that accompany any fuel-burning device.
 - **Do** crack windows in homes, campers, motor homes, and boat cabins when using unvented, fuel-burning appliances.
 - **Do** make sure that your car, truck, and/or motor home has a functional, tight exhaust system. Repair exhaust leaks promptly.
 - **Do** pay attention to symptoms, particularly if more than one person is feeling them. Remember that exposure symptoms can mimic the flu.
 - **Do** avoid strenuous physical activity during peak traffic times, in high volume traffic areas, and during inversions.
 - **Don't** ever cook or heat with charcoal grills indoor—even in a fireplace.
 - **Don't** idle vehicles in the garage—even if the door is open. CO can accumulate quickly and enter your home.
 - **Don't** sit in a parked vehicle with the engine running and the windows closed.
 - **Don't** use any gasoline-powered engines (mowers, trimmers, snow blowers, chain saws) or tools (welders, pumps, compressors, generators, high pressure washers, concrete cutting saws) in buildings or semi-enclosed spaces.
 - **Don't** ever use gas stoves or ovens to heat your home.
 - **Don't** sleep in any room with an unvented gas- or kerosene-burning space heater.
 - **Don't** close the damper to the fireplace unless the fire is completely out and the coals are cold.
 - **Don't** ride in covered pickup truck beds (campers, canopies). Air turbulence around the moving vehicle can draw exhaust in.
- For additional information, please contact the Idaho Indoor Environment Program at 1-800-445-8647 or the IAQ Information Clearinghouse at 1-800-438-4318.